

**MOBIE Design Challenge 2019 – Oxted School**

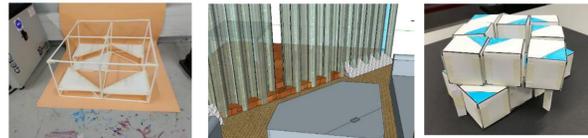
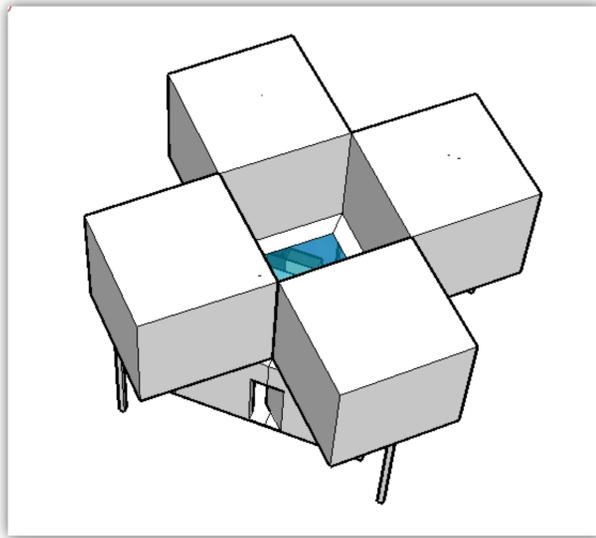
**Considerations**

- Technology** – Technology was considered when designing our pod construction by ensuring it could accommodate a dishwasher, washing machine and dryer and a fridge. LG Solar panels are included on the roof to provide a sustainable supply of power although the pods can also be connected to the national grid.
- Size** – The arrangement of the minimum 4 pods are in a square formation to maximise space from the removed walls.
- Space** – The space for our 4-pod construction was divided to make 5 rooms when configured in a square formation. This allows for a kitchen, bathroom, bedroom, dining room and lounge. This maximises the 24.6sqm floor space by having thin partitioning walls between each room.
- Family growth** – Family growth can be accommodated for by buying additional bedroom pods which can be attached on top or on the sides of existing pods. Alternatively, additional kitchen and lounge pods can be purchased if preferred.
- Comfort** –For the comfort of the pod we tried to maximise the space and keep furnishings to regular sizes for example a full-length bed and a full depth sofa
- Individuality** – The outside of the pod features a minimalist design using the rain screen cladding and glass windows
- Entertainment** – entertainment has been considered with a lounge pod with a sofa and TV. The dining area in the 4 pod formation can be used as a social area and for entertainment.
- Aesthetics** – For the aesthetics of the pod we choose a minimalist design to allow the user to fully customise and change to their liking.

- Solar panels can be used to power the pods during spring and summer and the pods can also be attached to the national grid so that they can be powered during autumn and winter.

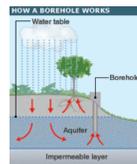
**Development of concept**

These pictures are of some of the models that we have made the early ones were made out of art straws and paper and we have 2 different versions of these as we split up to try and get as many ideas as possible. The left one has also got an extension onto the top as an idea that it could be extended upwards rather than just outwards. We then went on to make a model out of 4mm square rods and card. This one is a lot more accurate to how the end product will look. There is also a rough plan on where each section will go and what's in them. The holes in the card are where the windows will be including the skylight in the roof. The windows will be one way glass so that if you put an electric current through it but it will fully transparent when no current is put through it. I have included a plan on where each window and skylight will be.



- For the process of attaching each pod together we would use similar methods found on shipping containers. This would mean the pods would be securely held flush against one another and would be able to be detachable or movable.

- The ideal location of our pods would be on a brownfield site with structural foundations. This is to make the design sustainable and as they are able to be used most places, this is a good solution for wasted brownfield sites.

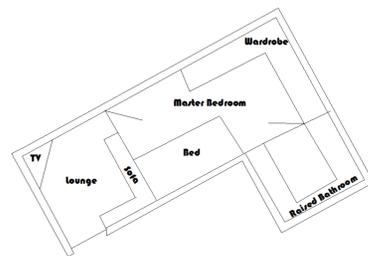
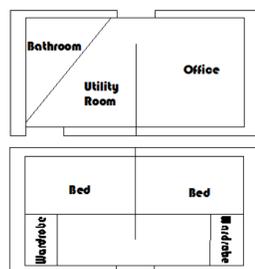
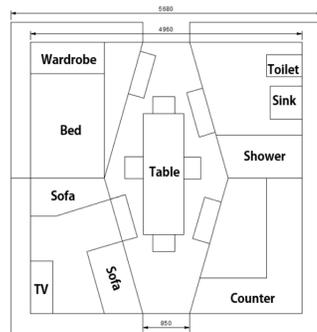


- A solution to water supply for the pod would be to make a borehole and attach a water purification system to the end. This will provide a sustainable drinking water source to the pod and will be cheaper than using a water company.



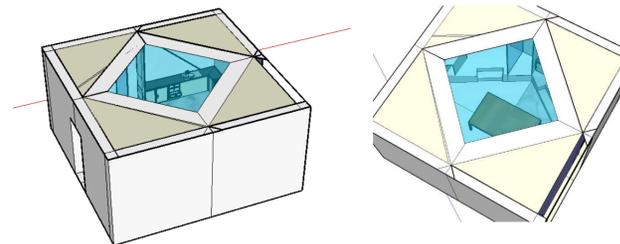
**Floor plan**

- To make the most out of the 24.6sqm area of the 4 minimum pods we created a 5<sup>th</sup> room in the centre of the 4. This allows for a more social layout and a communal space. The bedroom and the bathroom will both have partitioning walls to create a more private space. However the kitchen and lounge would be open plan to ensure maximum space of the central area.
- The flooring of the four rooms on the outside of the pod will each be raised by 440mm to allow for space underneath the floor that would otherwise be wasted. This space could be accessed by draws that open out into the communal dining area. A 220mm step would also be made on each of the 4 outer rooms so that they can be easily accessed



**Configuration**

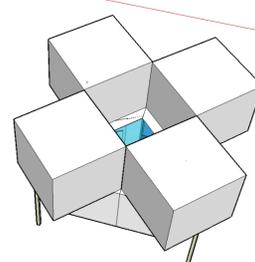
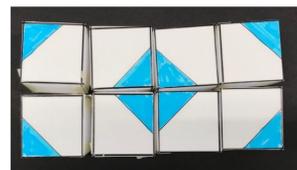
The new two storey house can be expanded to create more living space. Still utilising the unique diagonal walls and the under floor storage we have found more ways to create space. In the first starter four pods you will get you basic living space. A bedroom, a kitchen, a bathroom, a lounge and a dining area with a central overhead skylight.



In the next two pods you would get a utility in room to store hats coats and shoes with a guest toilet in the same space.

After that the next two you would purchase would be bedrooms this may be important for a family that is looking to expand.

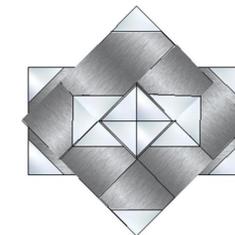
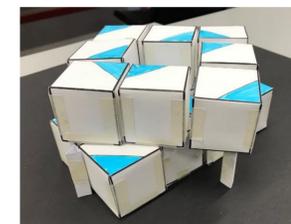
The 8 pods could be configured on one level or on 2 floors as shown, maintaining sky-light:



Then if your parents decide to retire and want to become closer to you and your family get the next 4 pods that allow you to reach for the skies. The next option you can purchase would be the second story conversion you can move up to the lofty height and let your parents stay downstairs if they have trouble with mobility. In these pods you would have a landing to step out on admire the breath-taking views. Then you would go left and find yourself with a double bedroom and an office to carry on the work without the distraction of the children.

In the need for more space the next four you would buy if you choose to is the ultimate luxury complete with its own upstairs lounge and a master bedroom that has a whole 12m square of space and it comes complete with an en-suite to allow you the privacy you deserve. This would allow you to move out of the old double bedroom and let this be the space you children dream of.

16 Pod configuration:



As your children grow older they may decide to move out, then you can choose to downsize and have certain modules taken away. The modules that you decide to take away will be then recycled and placed on someone else's home to support sustainable living and recycling.

This all lets you expand as a family and brings you closer together without getting rid of the views of the sky or the urban citadel around you. With the steel beam supporting the outer edges of your home your friend will marvel at the engineering brilliance and the stylish good looks of your tards like affordable home.

OXTED SCHOOL

**16-18**  
AGE CATEGORY